

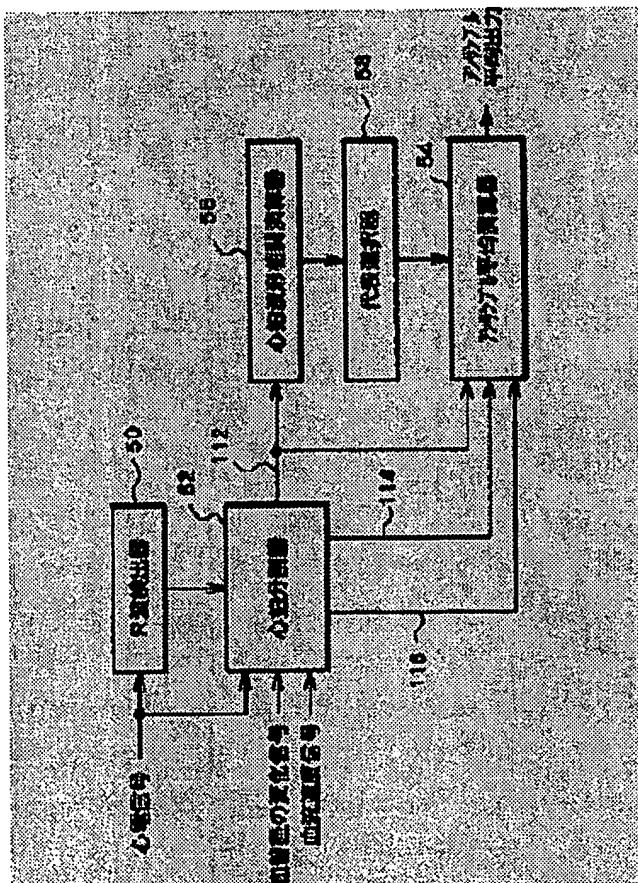
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**IN VIVO SIGNAL MEASUREMENT DEVICE AND ULTRASONIC DIAGNOSTIC  
SYSTEM**

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- international: A61B8/06; A61B8/08  
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Application number: JP20010326783 20011024  
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**Abstract of JP2003126090**

**PROBLEM TO BE SOLVED:** To provide the in vivo signal measurement device synchronized with a heart beat which automatically targets the signal wave ensemble mean at every heart beat cycle. **SOLUTION:** The R wave detector 50 detects the R wave of electrocardiac signals. A heart beat divider 52 that divides varying signals indicating the blood vessel diameter and blood velocity as well as the electrocardiac signals at the timing of the R waves, and generates a sample wave in a heart beat cycle unit. A heart beat correlation calculator 56 calculates mutual correlation among plural sample waves involved in a specified period of the varying signals of the blood vessel diameter. Based on the calculated results, a representative selector 58 selects a fixed number of highly correlated sample waves as the typical sample waves whose parameter indicates the typical sample waves to be transmitted to an ensemble mean calculator 54. The ensemble mean calculator 54 functions to ensemble means of respective signals from the sample waves indicating the variation of the blood vessel diameter, blood velocity and the electrocardiac signals to be specified by the parameter.



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